INDEX.

PAGE

Abbott, Charles C., M. D. ... 315
Abney, Captain, F. R. S. ... 397
Aborigines of the Isthmus ... 427
Adulteration? What is ... 859
African, The, in the United States ... 433
African, The, in the United States, Letter on ... 841
Allen, Nathan, M. D., LL. D ... 139
Allen, Professor Grant ... 94, 662
Amos, Sheldon ... 721
Animal Life, Queer Phases of ... 589
Antiquity of Man in America ... 286
Arcadia, A South African ... 650
Asphalts, American and Foreign ... 188
Ass's Milk for Infants ... 425
Astronomers, Amateur, Work for ... 862
Astronomy, Physical. Modern Methods in ... 477

Backboned Family, Progress of ... 739
Bain, Alexander ... 458
Bates, Henry Hobart, M. A. ... 788
Beard, R. O., M. D ... 535
Beets, Wine from ... 287
Benson, Berry ... 120
Bergeron, M. ... 495
Bicycles and Civilization ... 556
Bicycle Controversy, The, in Stockbridge, Letter on ... 550
Birds in Cold Weather ... 431
Boileau, J. P. H., M. D ... 172
Boodle, R. W. ... 511, 606
Books noticed:
"Ideological Etymology" (Andrews) ... 123
"Elements of Universology" (Andrews) ... 123
"Vice Versa" (Anstey) ... 125
"The Coming Democracy" (Harwood) ... 126
"The Change of Life" (Tilt) ... 126
"The Cornell University Register" (1881–'82) ... 126
"Light" (Wright) ... 127
"Memoir of Daniel Macmillan" (Hughes) ... 127
"Progressive Religious and Social Poems" (Vaughan) ... 127
"Water-Power of the Southern Atlantic Water-Shed" (Swain) ... 127
"Studies in Science and Religion" (Wright) ... 128
"Physiognomy" (Stanton) ... 129

Books noticed: PAGE

"Statistics of the Population of the United States" (Walker)..... 129
"Wave-Lengths of Fraunhofer Lines" (Mendenhall)..... 129
"Report on Submarine Mines" (Abbott)..... 129
"Chronological List of Auroras," 1870 to 1879 (Greeley)..... 130
"Statistics of Public Indebtedness" (Porter)..... 130
"Appalachia," June, 1882 130
"Atlantis" (Donnelly) 131
"Meteorology of Tokio, Japan" (Mendenhall)..... 132
"The Chemistry of Saké-Brewing" (Atkinson) 133
"Construction and Maintenance of Time-Balls" (Hazen)..... 133
"George Ripley" (Frothingham) 276
"The New Botany" (Beal)..... 277
"Is Consumption contagious?" (Clapp)..... 277
"The Sun" (Young) 278
"La Navigation Électrique" (Dary)..... 278
"Report of Smithsonian Institution" (1880)..... 278
"The Peak in Darien" (Cobbe)..... 279
"The Fire-Protection of Mills" (Woodbury)..... 279
"Easy Star Lessons" (Proctor)..... 280
"Report of the Commissioner of Education for 1880"..... 280
"Manual of Blow-pipe Analysis" (Cornwall)..... 281
"Catalogue of 1,098 Stars"..... 282
"James Mill" (Bain)..... 414
"The Winners in Life's Race" (Buckley)..... 415
"Herbert Spencer on the Americans, and the Americans on Herbert Spencer"..... 416
"Unity Pulpit" (Savage)..... 416
"A Practical Treatise on Hernia" (Warren)..... 417
"Proceedings of the Biological Society of Washington"..... 418
"A Guide to Modern English History" (Cory)..... 419
"Address (New England Manufacturers' and Mechanics' Institute) (Atkinson)..... 419
"Contributions to Mineralogy" (Genth)..... 419
"Age of Tejon Rocks of California" (Heilprin)..... 420
"Proceedings of the Davenport Academy of Natural Sciences"..... 420
"How to succeed" (Abbott) 420
"Cerebral Hyperæmia; Does it exist?" (Buckley)..... 420
"The Solution of the Pyramid Problem" (Ballard)..... 421
"A Guide to Collodio-Etching" (Hartley)..... 421
"United States Commission of Fish and Fisheries" (1879)..... 421
"The Gulf Stream" (Bartlett)..... 422
"Proceedings of the Department of Superintendence of the National Educational Association" (1882)..... 422
"Putnam's Art Hand-Books" (Carter)..... 422
"A Dictionary of Music and Musicians" (Grove)..... 422
"The Hoffman Cover and Binder"..... 423
"American Journal of Physiology"..... 423
"Modern Stenographic Journal"..... 423
"Ragnarok" (Donnelly)..... 560
"Zoölogical Sketches" (Oswald)..... 561
"Check-List of North American Birds" (Coues)..... 563

Books noticed: PAGE
"New Check-List of North American Moths" (Grote) 563
"House-Drainage" (Gerhard) 564
"Diagram for Sewer Calculations" (Gerhard) 564
"New Method of learning the French Language" (Berger) 564
"Chapters on Evolution" (Wilson) 564
"Dress and Care of the Feet" (Kahler) 565
"Report of the Maryland Fish Commissioner" (Ferguson) 565
"Report of the Wisconsin Board of Health" 565
"Youth: Its Care and Culture" (Mortimer-Granville) 565
"Report of the Detroit Board of Health" 566
"American Citizens' Manual" (Ford) 566
"Railroad Economics" (Robinson) 566
"Strength of Wrought-Iron Bridges" (Robinson) 566
"Potable Water" (Folkard) 566
"Ottawa Field Naturalists' Club" 566
"Report of the Ninth Cincinnati Industrial Exhibition" 566
"Practical Life and the Study of Man" (Wilson) 567
"Schelling's Transcendental Idealism" (Watson) 567
"Speech and its Defects" (Potter) 567
"The Magazine of Art" 567
"Revue Scientifique" 568
"Facts and Phases of Animal Life" (Morwood) 704
"Swift" (Stephen) 705
"Herbert Spencer on American Nervousness" (Beard) 706
"History of the Pacific States of North America." *Central America.* (Bancroft) 707
"Anatomy of Birds" (Shufeldt) 708
"American Society of Microscopists 708
"Poems" (Savage) 708
"Work at Harvard Observatory" (Pickering) 709
"Gospel of the Stars" (Seiss) 709
"Education, Moral" (Buchanan) 710
"Report of the Peabody Museum" 710
"Lectures on Art" 711
"The Factors of Civilization" 711
"American Hero-Myths 711
"Wide Awake" 712
"Report on Six Hundred Tornadoes" 712
"The Science of Politics" (Amos) 850
"Description of Houghton Farm" (H. E. A.) 851
"Anatomical Technology" (Wilder and Gage) 853
"Experimental Physiology" (Owen) 853
"Physics, and Occult Qualities" (Taylor) 853
"Barometric Hypsometry" 854
"The Eleventh Commandment" (Barrili) 854
"Signal-Service Tables" (Dunwoody) 854
"A Study of Tennyson's 'The Princess'" (Dawson) 854
"Text-Book of Geology" (Geikie) 855
"Annals of the Astronomical Observatory of Harvard College" 856
"Quintus Claudius" (Eckstein) 856
"Traits of Representative Men" (Bungay) 856

PAGE
Brain-Weight and Brain-Power 172
Briesen, T. von 503
Brooks, Professor W. K. 195, 364
Buckley, Arabella B. 739
Büttner, C. G. 650

Calendar, Origin of the, and Astrology 825
Camp-Meeting, Evolution of the 622
Cell-State, The 174
Cemetery, A Prehistoric 445
Cesspools, The Poison of 718
Child, A. L., M. D. 204
Chittenden, C. E. 842
Citric Acid, Action of, on Minerals 288
Civilization, Bicycles and 556
Civilization, Coeval Grades of 430
Cohn, Professor Ferdinand 174
Cold, The Poles of Extreme 570
Colored Population, Vital Conditions affecting the 714
Comets, M. Respighi on the Light of 574
Comets, Professor Huggins on 428
Comet, The Great, of 1882 289
Consumption, Infectious 716
Continent, The Sunken Southern, again 429
Copyright Discussion, Letter on 842
Correspondence 120, 550, 841
Cowries and African Currency 141
Craters, Lunar, The Formation of 495
Cremation, Advantages of 861
Criminality in Animals 244
Cults, Ancient, among the Berbers of Morocco 286
Curiosities, Physiognomic 63
Customs, Ancient Old World and American, Analogies of 287

Dawkins, W. Boyd 72
Deafness, Dizziness and 863
Deformities, Bodily, in Girlhood 322
Delbœuf, M. 767
Depression, The, of our Atlantic Coast 136
Donkey, Origin of the 783
Draper, Professor Henry, Sketch of 405
Du Bois-Reymond, Emil 20
Dwarfs and Giants 767

Eatables, A Few Words about 677
Editor's Table 121, 268, 410, 553, 699, 843
Education, Bain on University 559
Education, Brain-Power in 539
Education, Machine 553
Education, Mechanical and Vital 719

PAGE

Education, the Influence of, on Observation 359
Edwards, Henri Milne-, Sketch of..... 545
Egleston, N. H..... 774
Egypt as a Health Resort 141
Elder and the Juniper, Folk-Lore of the..... 861
Engler, E. A. 156, 328
Errata..... 863
Esquimaux, The..... 137

Farming, Scientific, at Rothamsted..... 81, 383
Fingal's Cave, Is it artificial?..... 231
Flora, North American, Succession of 135
Flora, The, of North America..... 283
Florida, Remedial Value of the Climate of..... 641
Foester, Professor William 825
Fog-Signals, Aberrations in..... 857
Foot-prints, Fossil, Human, in Nevada..... 137
Forestry, Scientific, Progress of 140
Forests, The Census and the..... 774
Forests, The World's, Waste of 428
Forest, The Possible Annual Yield of a... 572
Fouillée, M. Alfred..... 300, 521

Geological Map, the Proposed, of Europe..... 283
Giants, Dwarfs and..... 767
Gilliam, Professor E. W 433
Girlhood, Bodily Deformities in..... 322
Gold, The Decrease of..... 503
Growth, Annual, of Trees..... 204
Growths, Some Curious Vegetable 30
Gulf Stream, The..... 134

Hall, James, LL. D..... 815
Hallock, E. J., Ph. D..... 188
Hamilton, Frank Hastings, M. D..... 1
Hammond, Dr. W. A..... 760
Héricourt, M. 225
House-Walls, Hygiene in..... 135
Hunt, T. Sterry, F. R. S..... 165

Ice and Fog in the North Atlantic..... 628
Implements, Stone, Value of the Evidence of..... 859
Increase, Human, The Law of 39
Indians of the Hudson Bay Territory..... 424
Indians, The American, and the Aryan Race 286
Infection? Do House-Flies convey..... 571
Insanities, Perceptional..... 760
Iroquois, the Pagan, Festivals of 860
Isthmus, Aborigines of the..... 427

James, Joseph F..... 445
Janssen, Jules C. 477

PAGE

Jaw-Bone, The Infant Giant, of Stramberg 138
Juniper, Folk-Lore of the Elder and the..... 861

Kacheen, Marriage Customs of the..... 573

Lacassagne, A..... 244
Land Question, Herbert Spencer and the..... 858
Lansing, Gerrit L..... 577
Lapham, Increase Allen, Sketch of..... 835
Larrabee, W. H..... 30
Law against Right 699
Ledyard, L. W..... 842
Le Sueur, W. D., B. A..... 145
Letters, Roman, Physiological Analogies of the..... 285
Life, American, Social Forces in..... 491
Life, Animal, Queer Phases of..... 589
Life-Insurance, The Decline of..... 429
Lion, The British..... 72
Literary Notices..... 123, 276, 414, 560, 704, 850
Lockwood, S., Ph. D..... 341
Lunatics, Criminal, Responsibility of..... 859
Lyman, Oliver E..... 803

Magnified Objects, Apparent Size of..... 137
Mallock and his New Science..... 121
Man, Antiquity of, in America..... 286
Marriage Laws, Indian..... 135
Mastodon, A, in an Old Beaver-Meadow..... 341
Matter, Speculations on the Nature of..... 788
Medicine, The Schools of..... 535
Mental Shock and Inebriety..... 717
Miles, Manly, M. D..... 81, 383
Moraine, The Glacial, in Pennsylvania..... 134
Mortality in Town and Country..... 424
Mound-Builders, Were the, Indians?..... 285
Musical Sensations..... 225

Names, Geographical, Central American, Letter on..... 120
Narcotics, Lessons on the Danger of..... 718
Nerve-Vibration as a Remedy..... 575
North Atlantic, Ice and Fog in the..... 628
Notes 143, 288, 431, 575, 719, 863

Observatory, Dearborn, Work of the..... 570
Ohm's Law, Experimental Demonstration of..... 713
Oswald, Felix L..... 6, 345, 471, 589, 754
Overwork, The Question of 411

Parrish, Dr. Joseph..... 622
Pasteur, A Medal to..... 284
Pathology, A Chapter in Transcendental..... 659
Petroleum, Origin of..... 284

PAGE
Philanthropy, Scientific 300, 521
Photography, Recent Advances in 397
Physics, Instruction in 862
Physiognomic Curiosities 63
Pietrement, C. A. 783
Piratical Publishers 656
Piratical Publishers or a Piratical Government 702
Plants, Use of the Gummy Secretions of 572
Playas and Playa Lakes 380
Politics, Hindrances to the Science of 848
Politics, Nature and Limits of the Science of 721
Popular Miscellany 134, 283, 424, 569, 713, 857
Prairies, Formation of 285
Pre-Indian People, Traces of a 315
Pressure, Atmospheric, Subterranean Effects of 716
Primitive Man? Who was 94
Principle in Small Things 273
Publications Received 133, 282, 423, 568, 712, 856
Publishers, Piratical 656

Radcliffe, Dr. C. B 677
Radiations, Solar, Langley's Observations on 715
Railway Consolidation, Growth and Effect of 577
Railway Consolidation, Letter on 842
Records, Ancient Maya 718
Recreation, the Gospel of 354
Redding, Benjamin B., Obituary Notice of 575
Religion, Natural 511, 606
Rhine, Alice Hyneman 625
Roberts, Charles, F. R. C. S 322
Roman Remains 863
Rothamsted, Scientific Farming at 81, 383
Russell, Israel C 380
Russian Geological Research 287

Schleiden, Matthias Jacob, Sketch of 256
Schools, European Technical 573
Schreiber, Dr. A 109
Science, Incentives in the Pursuit of 844
Science in Relation to the Arts 48, 206
Science in the Sick-Room 497
Sciences, the Natural, The Relations of 165
Science, The, of the Present Period 20
Scientific Weekly, The New 843
Scott, Leonard 656, 843
Sea-side, Sewage at the 625
Servant-Girls, Legal Status of the 803
Sewer-Gas 1
Shackford, Captain J. W 628
Shooting-Stars, their Traditions and Origin 142
Sick-Room, Science in the 497

PAGE
Siemens, C. W., F. R. S. 48, 206
Small Things, Principle in. 273
Smith, Mr. Goldwin, on the Data of Ethics. 145
Smyth, C. Piazzi. 240
Snake, A Lignified. 139
Snake, Lignified, More about the. 713
Social Forces in American Life. 491
Spectroscope, The, and the Weather. 240
Spencer, Herbert 354, 491
Spencer, Herbert, and the Land Question 858
Spencer, Herbert, The Banquet to. 410
Spencer's Impressions of America. 268
Stanley, H. 120
Statue, The Bartholdi. 414
Stature, American. 571
Stethoscope, Evolution of the. 488
Storms, Origin of, Letter on. 120
Suicide in Switzerland. 860
Sumatra, Life among the Battas of. 109
Sun, Theory of his Light and Heat, Letter on. 120
Superstition, Curiosities of. 345, 471, 754
Survey, Northern Transcontinental. 715
Survey, The New York Geological. 815

Thomson, Sir C. Wyville, Sketch of. 693
Time Keeping in London. 156, 328
Trees, Annual Growth of. 204

University Ideal, The. 458

Varieties, Entertaining. 263
Venus, Observations of the Recent Transit of. 569
Vice, The Economic Function of. 732
Vivisection and Practical Medicine. 615

Walton, Dr. George E. 641
Weeks, Clara S. 497
Wheat, The Pedigree of. 662
Whitehouse, F. Cope, M. A. 231
Wilks, Samuel, M. D 488
Wine from Beets. 287
Wurtz, Charles Adolphe, Sketch of. 114

Yeo, Dr. G. F. 615
Young, Professor C. A. 289

Zoölogy, Speculative. 195, 364

END OF VOL. XXII.